

REMARKS

Applicants have carefully reviewed and considered the Office Action dated May 29, 2002 and the references cited therein. In response, applicants have amended claims 1, 10-17 and 18 to improve their form and more clearly claim the present invention. Applicants have also added new claims 21-59. Thus, claims 1-59 are presently pending in this application. Applicants believe the application is now in condition for allowance. Accordingly, favorable reconsideration is respectfully requested.

As an initial matter, applicants would like to thank the Examiner for the courtesy extended during the personal interview on November 25, 2002. One of the inventors, LeRoy Hagenbuch, and one of his attorneys Gregory C. Bays, attended the interview. The interview was generally directed towards explaining the various features of the invention and how those features distinguished over the conventional methods for estimating the volumetric capacity of an off-highway truck body. These features included: (1) using angle of material repose data collected from an anticipated point of use (see claim 21); (2) developing a three dimensional volumetric load model having generally rounded-off corners so as to produce a more conically shaped load model (see new claim 31); (3) designing the dump body to correspond to the loading method or implement to be used at an anticipated point of use such that the material can be loaded into the dump body from the lowest practical vertical location (see new claim 39); and (4) developing a three dimensional load model having a lop load plateau (see new claim 44).

A demonstration of "real world" loading conditions was also shown during the interview using scale models of off-highway trucks. An agreement on specific claim language was not reached.

Turning to the Office Action, the Examiner objected to the drawings as including material that should be designated as prior art. While certain individual steps in the process described in the application may have been known individually, the steps are depicted in the drawings as part of an exemplary multi-step process according to the present invention. Applicants respectfully submit that the multi-step process is not from the prior art and that it would be misleading to describe individual steps as prior art. Accordingly, applicants respectfully traverse the drawing objection relating to the use of a "prior art" legend.

The Examiner also objected to the drawings on the basis that they contain colored photographs as FIGS. 21 and 22. In response, applicants have requested entry of a drawing amendment by which the photographs as filed are replaced with corresponding line drawings. No new matter would be entered by way of the entry of the replacement drawings.

The Examiner also raised objections to the drawings and made corresponding § 112 enablement and indefiniteness rejections of claims 10-11 and 13-18 based on the use of the term "corner void". In response, applicants have amended the claims to clarify this issue. In the specification, the term corner void is described as referring to the lack of material in the corners of the dump body as compared to conventional theoretical load profiles because of the tendency of the load material to form a generally conical shape. (See, e.g., pg. 2, lines 25-35). This is illustrated for example in FIG. 19 which shows the extra material present in the corners of theoretical load profiles as compared to a load profiled according to the present invention. In view of the claim amendments and at least the above cited sections of the specification, applicants submit that the drawing objection and claims rejections relating to the term "corner void" should be withdrawn.

Turning to the claim rejections based on 35 U.S.C. § 103, independent claim 1 stands rejected as being unpatentable over U.S. Patent 5,887,914 (the '914 patent) in combination

with a Caterpillar brochure. Claims 2-9, 12 and 19-20 also stand rejected as obvious in the view of the '914 patent and Caterpillar brochure either alone or in combination with a second Caterpillar brochure or a Euclid brochure. Applicants respectfully submit that the amended claims as well as the new claims are not taught or suggested by the cited references either alone or in combination.

The references cited in the Office Action do not teach a process by which a dump body can be custom-designed for a specific anticipated point of use such as recited in amended claim 1. Specifically, the references cited by the Examiner teach using the same load model for designing each and every dump body. Thus, the prior art teaches making a generic dump body for every application. For example, the Caterpillar brochure teaches using a 1.7:1 heaped load pattern based on "continuous analysis of actual weight studies". However, like the flawed SAE Standard, the Caterpillar teaches using this 1.7:1 heaped load pattern for designing every body, no matter what the characteristics are at an anticipated point of use for the body. The only difference between the Caterpillar method and the SAE standard is the specific angle of repose used to create the model (i.e., 1.7:1 vs. 1:1/2:1). In sharp contrast, the invention recited in amended claim 1 and new claim 52 provides a dump body that is designed based on a three dimensional volumetric load model that is generated using data collected from an anticipated point of use. The result is a body that is custom-designed for the anticipated point of use.

The references cited by the Examiner also do not teach or suggest any of the new independent claims. With respect to new claim 21, the cited references do not teach or suggest, *inter alia*, using data collected from an anticipated point of use or that the data includes at least one angle of material repose. With respect to new claim 31, the cited references do not teach or suggest, *inter alia*, rounding-off the corners of the three-

dimensional volumetric load model so that the load model more closely resembles a conical shape. In contrast, the prior art teaches developing a load model with straight angled edges, producing a load top that more closely resembles the roof of a house.

With respect to new claim 39, the cited references do not teach or suggest, *inter alia*, using data from an anticipated point of use, that the collected data includes a method used for loading material into an existing body and that the body is designed such that material can be loaded into the dump body from the lowest practical vertical location. With respect to new claim 44, the cited references do not teach or suggest, *inter alia*, developing a three dimensional volumetric load model including developing a load plateau at the top of the model.

New claim 52 is substantially the same as amended claim 1 except that the data is collected from a representative point of use. For example, if the body is to be used in a new mine, data could be collected from a similar filled haulage environment. (See pg. 11, lines 3-22). Applicants further submit that the dependent claims are not taught or suggested by the cited art.

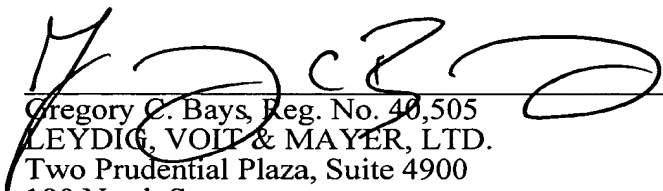
In sum, the cited references neither appreciates the problems to which applicant's claimed invention is directed nor teaches or suggests a solution to those problems in the manner set forth in applicant's claims. Inasmuch as none of the cited references provide any motivation to combine any alleged teaching of the references, it is respectfully submitted that any such combination would be improper. The only way the claimed invention would result from the cited references is if hindsight was used and only if selected teachings of each references was used. Moreover, obviousness of the present invention is further rebutted by the significant commercial success of the invention. In particular, Philippi-Hagenbuch, the

In re Appln. of HAGENBUCH et al.  
Application No. 09/333,379

assignee of the present invention, has sold approximately sixty dump bodies designed using the inventive process for use in mines operating in the United States, Australia and Chile.

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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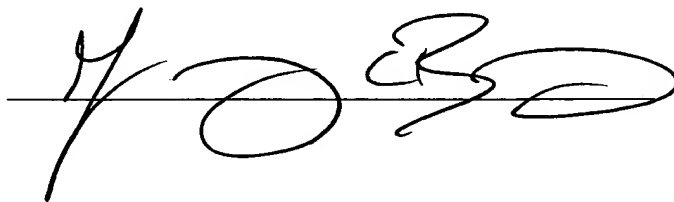
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In re Appln. of HAGENBUCH et al.  
Application No. 09/333,379

CERTIFICATE OF MAILING

I hereby certify that this RESPONSE TO OFFICE ACTION (along with any documents referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

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